UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,998	12/21/2005	Carina Onneby	43315-217070	5996
	26694 7590 12/23/2009 VENABLE LLP		EXAMINER	
P.O. BOX 3438		CHIN, HUI H		
WASHINGTON, DC 20043-9998			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			12/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
Office Action Commence	10/531,998	ONNEBY ET AL.				
Office Action Summary	Examiner	Art Unit				
	HUI CHIN	1796				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	l. lely filed the mailing date of this communication. (35 U.S.C. § 133).				
Status						
1)⊠ Responsive to communication(s) filed on <u>08 De</u>	ecember 2009.					
	action is non-final.					
3) Since this application is in condition for allowar	/ <del></del>					
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4)⊠ Claim(s) <u>1-31</u> is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-31</u> is/are rejected.						
7) Claim(s) is/are objected to.	7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and/or	election requirement.					
Application Papers						
9)☐ The specification is objected to by the Examiner.						
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
12)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)⊠ All b)□ Some * c)□ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
A44-2-1						
Attachment(s)  1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)						
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date						
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	atent Application					

Application/Control Number: 10/531,998 Page 2

Art Unit: 1796

### **DETAILED ACTION**

### Continued Examination Under 37 CFR 1.114

- 1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/8/2009 has been entered.
- This Office Action is in response to the Amendment filed 12/8/2009.
   Claims 1-31 are now pending.

# Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35U.S.C. 102 that form the basis for the rejections under this section made in thisOffice action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 4. Claims 1-12, 14-28 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by <u>Yadav et al.</u> (US Patent 6,228,904).

Application/Control Number: 10/531,998

Art Unit: 1796

Yadav et al. disclose a composite material comprising a polymer matrix material and a nanostructured filler in powder form having a domain size of less than about 100 nanometers, wherein the volume % of filler is from 20-80 (claim 1, Table 1).

The limitations of claim 2 can be found in <u>Yadav et al.</u> at claim 1, where it discloses fillers having a size less than about 100 nm.

The limitations of claims 3 and 4 can be found in <u>Yadav et al.</u> at col. 5, lines 56-61, where it discloses electrical properties.

The limitations of claims 5-8 and 18-25 can be found in <u>Yadav et al.</u> at col. 4, line 14, where it discloses the  $TiO_2$  which can be formed into fiber, thus having aspect ration of more than 10.

The limitations of claim 9 can be found in <u>Yadav et al.</u> at Table 1, where it discloses 20 volume % of fillers.

. The limitations of claims 10, 11 and 28 can be found in <u>Yadav et al.</u> at claim 7, where it discloses the polyalkenes.

The limitations of claim 12 can be found in <u>Yadav et al.</u> at claim 16, where it discloses the device.

The limitations of claims 14 and 15 can be found in <u>Yadav et al.</u> at Example 2, where it discloses the 16 nm.

The limitations of claim 16 can be found in <u>Yadav et al.</u> at col. 4, line 16, where it discloses SiC.

The limitations of claim 17 can be found in <u>Yadav et al.</u> at col. 4, line 14, where it discloses TiO<sub>2</sub>.

Application/Control Number: 10/531,998

Art Unit: 1796

The limitations of claims 26 and 30 can be found in <u>Yadav et al.</u> at Table 1, where it discloses 20 volume % of fillers.

The limitations of claims 27 and 31 can be found in <u>Yadav et al.</u> at Table 2, where it discloses 15 volume % of fillers.

## Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Yadav et al.</u> (US Patent 6,228,904) as applied to claims 1-12, 14-28 and 30-31, in view of Bernhoff et al. (US 2002/0070428).

The disclosure of <u>Yadav et al.</u> is adequately set forth in paragraph 4 and is incorporated herein by reference.

However, <u>Yadav et al.</u> is silent on the application in electric power cable.

Bernhoff et al. disclose a semiconductive device comprising a field grading material, wherein the material comprises a polymer based material filled with particles of BaTiO<sub>3</sub>, TiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, ZnO or SiC, to provide the material to be used for high power cable terminal (claim 17, [0003], and [0041]). In light of such benefit, it would have been obvious to one of ordinary skill in the art at the time

Art Unit: 1796

the invention was made to use this material for the application in power cable with the expected success.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUI CHIN whose telephone number is (571)270-7350. The examiner can normally be reached on Monday to Friday; 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/531,998 Page 6

Art Unit: 1796

/Ling-Siu Choi/ Primary Examiner, Art Unit 1796

HC